

Art Unit: 2800

CLMPTO

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1. (Currently Amended) A method of routing a terminated call to a subscriber from an Internet Protocol based domain [[(IMS)]] to a circuit switched domain [[(CS)]], wherein said Internet Protocol based domain [[(IMS)]] has call state control functionalities implemented,

said method comprising the steps of

receiving an invitation [[(S1)]] of said subscriber for a call by at least one call state control functionality within said Internet Protocol based domain [[(IMS)]];

obtaining [[(S5)]] the profile of said subscriber from said home subscriber serving means [[(HSS)]] to a call state control functionality [[(S-CSCF)]];

requesting [[(S7)]] further routing information from said home subscriber serving means [[(HSS)]] to a call state control functionality [[(S-CSCF)]];

requesting [[(S7)]] further routing information from said home subscriber serving means [[(HSS)]];

requesting [[(S9)]] a switching means [[(VMSC)]] within said circuit switched domain [[(CS)]] currently visited by said subscriber for said roaming number by said home subscriber serving means [[(HSS)]];

returning [[(S10)]] said roaming number of said subscriber to said home subscriber serving means [[(HSS)]] by said visited switching means [[(VMSC)]];

returning [[(S12)]] said roaming number as said further routing information from

said home subscriber serving means [[(HSS)]] to said call state control functionality [[(S-CSCF)]]; and

establishing [[(S131-S133)]] said call via gateway means [[(BGCF, MGCF)]] for connecting said domains [[(IMS, CS)]] as well as via said visited switching means [[(VMSC)]] to said subscriber.

2. (Currently Amended) A method of routing a terminated call to a subscriber according to claim 1, wherein

subsequent to the receipt of said invitation [[(S1)]], a step of requesting [[(S2)]] the location of said subscriber from said home subscriber serving means [[(HSS)]] is performed; and

subsequent to said return of an indication [[(S3)]]], a step of inviting [[(S4)]] another call state control functionality [[(S-CSCF)]] for said call is performed, wherein said other call state control functionality [[(S-CSCF)]] performs all subsequent steps mentioned in claim 1 as related to said call state control functionality.

3. (Currently Amended) A method of routing a terminated call to a subscriber according to claim 1 [[or 2]], wherein an IP multimedia functionality and a subset of home location registering functionality are integrated into said home subscriber serving means [[(HSS)]], and

 said registering request [[(S2)]], if applicable, and return [[(S3)]] is performed with said IP multimedia part;

 said profile request [[(S5)]] and download [[(S6)]] is performed with said IP multimedia part;

 said roaming number provision requesting step [[(S7)]] as executed to said home subscriber serving means [[(HSS)]] is performed with said IP multimedia part;

 subsequent thereto, a step [[(S8)]] of requesting said home location registering part for the provision of the roaming number of said subscriber is performed by said IP multimedia part;

 said roaming number provision requesting step [[(S9)]] as executed to said visited switching means is performed with said home location registering part;

 said roaming number returning step [[(S10)]] as executed by said visited switching means [[(VMSC)]] is performed with said home location registering part;

 subsequent thereto, a step of returning [[(S11)]] said roaming number from said home location registering part to said IP multimedia part within said home subscriber serving means [[(HSS)]] is performed; and

 said roaming number returning step [[(S12)]] as executed to said serving call state

control functionality [[(S-CSCF)]] is performed by said IP multimedia part.

4. (Currently Amended) A method of routing a terminated call to a subscriber according to claim 1, wherein the step of requesting [[(S7)]] further routing information from said home subscriber serving means [[(HSS)]] involves the overriding of at least one terminating call related service functionality within said home subscriber serving means [[(HSS)]].

5. A method of routing a terminated call to a subscriber according to claim 4, wherein the terminating call related service functionality is a supplementary service functionality.

6. A method of routing a terminated call to a subscriber according to claim 4, wherein the terminating call related service functionality is an intelligent network trigger information related functionality.

7. (Currently Amended) A method of routing a terminated call to a subscriber according to claim 1, wherein

 said step of requesting [[(S7)]] further routing information is performed by submitting a Send Routing Information message;

 said step of requesting [[(S9)]] the provision of the roaming number of said subscriber are performed by submitting a Provide Roaming Number message;

 said step of returning [[(S10)]] said roaming number of said subscriber is performed by submitting a Provide Roaming Number acknowledgment message; and

 said step of returning [[(S12)]] said roaming number as said further routing information is performed by submitting a Send Routing Information acknowledgment message.

8. (Currently Amended) A serving call state control functionality device for providing a routing service to a circuit switched domain [[(CS)]], said serving call state control functionality [[(S-CSCF)]] device providing a functionality of an Internet Protocol based domain [[(IMS)]] and comprising means which are adapted to perform related steps of ~~any one of the methods according to claims 1-5~~ the method according to claim 1.

9. (Currently Amended) A home subscriber serving device capable of using routing information for terminating a call to a subscriber, comprising

an IP multimedia part and a home location registering part interfaced [[(S8, S11)]] to each other,
wherein said home location registering part comprises transceiver means [[(S9, S10)]] capable of requesting and receiving roaming numbers from the circuit switched domain.